

REMARKS

Reconsideration and allowance of the present application are respectfully requested.

Claims 1-13 remain pending in this application. Claims 12 and 13 have been added to claim further patentable features of the invention, as supported in the present specification, including, for example, at page 20, lines 15-23. No new matter has been added.

The applicants respectfully traverse the rejection of claims 1, 2, 7-9 and 11 under 35 USC 102(b) in view of Anderson et al. This reference does not anticipate the presently claimed invention or make it obvious.

Preliminarily, the applicants point out that important features of the presently claimed invention are “a light transmitting support”, “at least one of back-coating layers contains inorganic fine particles having an average particle size of a primary particle of 5 to 50 nm” and “a void ratio of the layer is 70% by volume or less” as recited, for example, in claim 1 as presently pending. The benefits of such features recited in the presently claimed invention are described at the paragraph bridging pages 3 and 4 of the present specification. Here the specification points out that there is a problem that transfer of a printed image to a back surface of another recording material occurs (see page 2, lines 29-36 of specification). The present inventors analyzed causes of such disadvantageous transfer and found the mechanisms thereof as described on page 4, lines 1-13 of specification. This is a specific problem involved in an ink-jet recording material to be used for a medical use or for an OHP.

Anderson et al. discloses an ink receptor media suitable for inkjet printing and comprises a substrate and an ink receptor on the substrate, the ink receptor comprising a mixture of surfactant templated mesoporous particles and organic binder (see claim 1 of Anderson). The Office Action, in section 4, notes that Anderson discloses that the substrate is a polyester polymeric film (column 10, line 38) and the ink receptor media comprises particles (column, 4, line 39) and hydrophilic binder such as polyvinyl alcohol (column 9, line 39), for applications in which transparency is desired, the particles have a mean particle size of about 10 to less than 50 nm (column, 6, line 66), the particles are silica prepared by wet process and comprise silane group (7, lines 6-49), the ink receptor media may be coated on both sides of the substrate (column 11, line 6), and the ink receptor media coated on the backside of the substrate is equivalent to the claimed back-coating layer.

However, Anderson contains no disclosure of the problem to be solved by the presently claimed invention and thus certainly does not disclose or suggest specific means to solve the problem. Also, one of the most important features of the presently claimed invention, i.e., “a void ratio of at least one of back-coating layers is 70% by volume or less” is neither described nor suggested in the reference. If the void ratio is more than 70% by volume, a solvent of ink is likely permeated or adsorbed whereby the back transcription (described at page 4, lines 1-5 of the present specification) of the solvent becomes undesirably significant as described at page 13, lines 33-35 of the present specification. Anderson discloses an intraparticle porosity of “surfactant templated mesoporous particles”

at column 3, lines 28-46 thereof, which is quite different from or irrelevant to the void ratio of the back-coating layer of the present invention.

Further, the back coating layer provided on a back surface of a support of the presently claimed invention does not at all intend to carry out ink-jet recording (reception of ink). That is, the ink-jet recording material of the presently claimed invention has a constitution that at least one ink-receptive layer is provided on one surface of a light transmissive support and at least one back-coating layer to which no ink jet recording is carried out is provided on the opposite surface, i.e., a back surface of the light transmissive support. Thus, the constitution whereby the ink receptor media may be coated on both sides of the substrate and the ink receptor media coated on the backside of the substrate pointed out in the Office Action at page 3, lines 1-3 is irrelevant to that of the presently claimed invention.

As a polyester film to be used as a support, there exist transparent and opaque films. In Anderson, an opaque support such as wood, metal, nonwoven material, etc. can be employed as disclosed at column 10, lines 32-36 thereof. When an embodiment is employed wherein an ink receiving medium has two major opposing surfaces and employed for printing on both surfaces (see Anderson at column 11, lines 6-8), the support must be an opaque film. This is because if the support is transparent, the respective images on the both surfaces are overlapped and the image on one surface is admitted with difficulty due to the presence of the image at the opposite surface.

In contrast, with respect to the presently claimed invention, a light transmissive support is used as recited, for example, in claim 1. Thus, Anderson can at most suggest a constitution having “a recording material having an ink-

receptive layer(s) on one surface or both surfaces of an opaque support" or "a recording material having an ink-receptive layer on one surface of a transparent support." Accordingly, the constitution of the presently claimed invention, comprising "a recording material having an ink-receptive layer(s) on one surface of a light transmissive support and a back coating layer(s) on the opposite surface of the support" significantly distinguishes from the constitution disclosed in Anderson.

Thus, even when a constitution of the ink jet recording material of the presently claimed invention appears to be superficially similar in part to that of Anderson, the problem of back transcription to be solved by the presently claimed invention is never recognized by Anderson and the problem can be solved by the presently claimed invention by employing the specific combination of the respective elements as recited in claim 1.

In view of the above, the applicants submit that the presently claimed invention is not disclosed by Anderson, and further, the presently claimed invention is not suggested by the teachings of Anderson. The presently claimed invention is fully allowable under both Section 102(b) and Section 103(a) in view of Anderson.

The applicants respectfully traverse the rejection of claims 3 and 10 under 35 USC 103(a) in view of Anderson et al. This reference does not suggest the presently claimed invention.

Anderson et al. has been thoroughly discussed above and distinguished from the presently claimed invention. The Office Action further states that the

reference teaches that the ink receptor media comprises cationic polymers that are pigment particles (column 9, lines 62-65).

The applicants point out, however, that even when the pigment described in Anderson appears similar to the pigment recited in claim 3 of the present application, the presently claimed invention is not obvious in view of Anderson. This is because the technical direction of the presently claimed invention and that of Anderson are significantly different from each other as discussed above. Thus, the disclosure of Anderson would not lead or suggest to a person of ordinary skill in the art the technical direction of the presently claimed invention. The Examiner is asked to reconsider the disclosure of Anderson in view of the above discussion of the technical teachings of Anderson.

For example, the constitution (void ratio) of claim 1 of the present application is neither described nor suggested in Anderson as discussed above with respect to Section 102(b) rejection, and the effects from such feature would not be suggested to a person of ordinary skill in the art.

At page 30, Table 1 of the present specification, experimental results are shown in which a void ratio of the back coating layer is changed from 6% (Comparative example 1) to 121% (Comparative example 2). Importantly, those which exceed 70% gave a poor result.

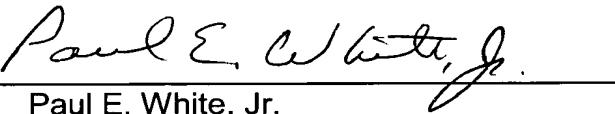
Since Anderson does not disclose or suggest the constitution of an ink-jet recording material of the presently claimed invention nor even suggest the problem to be solved by the presently claimed invention, the applicants submit that the presently claimed invention is not obvious in view of Anderson.

The applicants submit that the presently claimed invention is no where disclosed, suggested or made obvious by the teachings of Anderson. The presently claimed invention is fully allowable under Section 103 in view of the prior art.

In view of the above, the applicants submit that this application is in condition for allowance and a Notice to that effect is respectfully requested.

Respectfully submitted,

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